Newsletter

Eighth Edition – Spring 2022

We are delighted to share with you our eight edition of the HUGE Project Newsletter. This will be the last of our usual format before we launch our final brochure in newsletter format in the Summer of 2022.

The project is now winding up as we look to finish off the last of our activity. You can continue to find our range of tools, webinars, and training materials across on the HUGE website and we hope that you will continue to use them. The whole HUGE team will continue to be happy to work with you in using and supporting these tools.

We hope you have enjoyed keeping up to date with our activity through this newsletter. . Thank you for your continued support.

Easing Constraints and System Redundancy

Creating Industry

Low Carbon Travel

Creating Resilient Communities

In this edition you will find stories Techno-economic Assessment tool, the green hydrogen a report from Pau Farras on the Hydrogen Triple Alliance, and work from our Northern Irish Case Study.

As always please don't hesitate to get in touch with us via our website or social media channels, all of which can be found on this page.

- Website – www.Huge-Project.eu
- Twitter – @HUGE_Project_EU
- Facebook - @HugeProjectEU
- YouTube - The HUGE Project
- Linkedin - HUGE Project EU
- Email - info@huge-project.eu

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The Techno Economic Assessment Tool

As a partner in the HUGE Project, Action Renewables has been developing a range of tools that aim to help people setting out on the journey of developing a H2 project and these tools have been banded together to create a techno-economic assessment (TEA) tool.

The TEA is made up of several smaller parts – one of these is our cashflow analytics tool. This tool allows a user to input various pieces of financial information, feeding in initial investments, energy and water costs, maintenance, and potential profit and cash received among others which provides an estimate of roughly how long a project will take to repay any initial investment and start to become profitable.

For more information please see: huge-project.eu/hot-spot-map or contact: Aaron.Kernohan@actionrenewables.co.uk

Alongside this, we have developed a Sustainable Supply Chain Quality Comparison Model. This model takes into account economic, environmental and social indicators, with the balance of the model being focused on the economic factors. By assessing the impact of profitability, costs, productivity, employability, and pollution, among other factors, the model can be used to show the potential quality and strength of a H2 supply chain.

The best way of using the tools is in a comparative manner – you can adjust factors and see how they impact upon your plan. For example, what impact does an increase in costs make against a decrease in staffing employability? By thinking about these changes and using the tool to get an idea of the impacts different changes can make, a user can start to think about how best to progress the development of a project or business case.

INNOVATION

Comprising of pooling of competences and transnational learning will take place in order to create the Techno Economic Assessment (TEA) Tool. The overall objective will be to eliminate any bottlenecks and to optimize the process in order to provide a base for scale-up research.

DESIGN

It will combine process modelling and engineering design with economic evaluation and will be made available to the public and industry/professionals in all regions. This will result in the advance of innovative economic development solution that can be applied in practice in all the partner regions.

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The NI Case Study

In Northern Ireland, there have often been issues around the curtailment of wind turbines at times when energy production has exceeded the amount of energy that can be fed to the grid. As an island nation, Northern Ireland is heavily reliant upon imports of fuel. Issues around this have become even more fraught due to recent global events with oil and gas prices reaching record highs.

So how can NI become self-sustaining? H2 is seen as one answer. As part of the North West Europe Gencomm project, Translink and Energia have come together to develop a H2 supply chain in NI to show a glimpse of the future. In Wind to Wheels, a wind farm in Long Mountain has been selected to provide the energy and also house a H2 production plant. This plant was installed in May 2021 and produced its first H2 in June 2021.

Initially developed as a 500kW electrolyser, further funding was received to upgrade this to 1mW doubling the amount of production possible on site.

Once the H2 is produced it is compressed to 350 bar, fed into a tube trailer and transported 47 miles down the road to the Translink Milewater Service Centre where the refueling station and three H2 buses are located. Translink have also put in an order for further H2 buses looking to increase the fleet and showing great belief and support in this technology.

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Hydrogen HotSpot Map

On the 30th March 2022, the Hydrogen Triple Alliance organised a hybrid seminar on “Hydrogen Islands, opportunities and challenges” with the participation of over 65 people in person, and over 50 online. The seminar aimed at showcasing the importance of H2 on the clean energy transition linked to sustainable tourism. It focused on different green H2 production technologies on island territories. The event took place in the island of Tenerife coinciding with the Green Hydrogen in Tenerife 3-day programme, where the SEAFUEL hydrogen refuelling station was presented to the public with an open event done on the 31st March at the facilities of the Institute for Technology and Renewable Energy.

The seminar had the participation of 14 experts on renewable energy and hydrogen, including the project director for the Clean Energy for EU islands secretariat, Mr Jan Cornilie. HUGE’s participation was covered by Dr Pau Farràs (NUI Galway) who organised and chaired the event, as well as Jón Björn Skúlason from New Icelandic Energy. Mr Skúlason gave a presentation on heavy good vehicle (HGV) mobility in islands, aligned with the case study developed within the frame of the HUGE project.

And Finally...

All of the team at the HUGE Project would like to thank you for your continued support with the project, we’re coming towards the end of the project but are always keen to hear how we can help your green hydrogen aspirations.